

Virginia Department of Environmental Quality
Water Division
Office of Spill Response and Remediation

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9 VAC 25-91-10 *et seq.*

FACILITY

AND

ABOVEGROUND STORAGE TANK (AST)

REGULATION.

(effective June 24, 1998)

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PART I. PROGRAM ADMINISTRATION.

9 VAC 25-91-10. Definitions.

The following words and terms when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise:

“Aboveground storage tank” or “AST” means any one or combination of tanks, including pipes, used to contain an accumulation of oil at atmospheric pressure, and the volume of which, including the volume of the pipes, is more than 90% above the surface of the ground. This term does not include line pipe and breakout tanks of an interstate pipeline regulated under the federal Accountable Pipeline Safety and Partnership Act of 1996 (49 USC § 60101 *et seq.*).

“Board” means the State Water Control Board.

“Containment and cleanup” means abatement, containment, removal and disposal of oil and, to the extent possible, the restoration of the environment to its existing state prior to an oil discharge.

“Corrosion professional” means a person who by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

“Department” means the Department of Environmental Quality (DEQ).

“Discharge” means any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

“Facility” means any development or installation within the Commonwealth that deals in, stores or handles oil and includes a pipeline.

“Flow-through process tank” means (as defined in 40 CFR Part 280) a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

“Local building official” means the person authorized by the Commonwealth to enforce the provisions of the Uniform Statewide Building Code (USBC).

“Local director or coordinator of emergency services” means any person appointed pursuant to § 44-146.19 of the Code of Virginia.

“Major repair” means alterations that refer to operations that require cutting, additions, removal or replacement of the annular plate ring, the shell-to-bottom weld or a sizable portion of the AST shell.

“Oil” means oil of any kind and in any form, including, but not limited to, petroleum and petroleum by-products, fuel oil, lubricating oils, sludge, oil refuse, oil mixed with other wastes, crude oils, and all other liquid hydrocarbons regardless of specific gravity.

“Operator” means any person who owns, operates, charters by demise, rents, or otherwise exercises control over or responsibility for a facility or a vehicle or a vessel.

“Person” means an individual; trust; firm; joint stock company; corporation, including a government corporation; partnership; association; any state or agency thereof; municipality; county; town; commission; political subdivision of a state; any interstate body; consortium; joint venture; commercial entity; the government of the United States or any unit or agency thereof.

“Pipes” or “piping” means a pressure-tight cylinder used to convey a fluid or to transmit a fluid pressure and is ordinarily designated “pipe” in applicable material specifications. Materials designated “tube” or “tubing” in the specifications are treated as pipe when intended for pressure service.” This term includes piping and associated piping which is utilized in the operation of an AST, or emanating from or feeding ASTs or transfers oil from or to an AST (e.g., dispensing systems, including airport hydrant fueling systems, supply systems, gauging systems, auxiliary systems, etc.). This term does not include line pipe and breakout tanks of an interstate pipeline regulated under the federal Accountable Pipeline Safety and Partnership Act of 1996 (49 USC § 60101 *et seq.*).

“Pipeline” means all new and existing pipe, rights of way, and any equipment, facility, or building used in the transportation of oil, including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe; pumping units; fabricated assemblies associated with pumping units; metering and delivery stations and fabricated assemblies therein; and breakout tanks.

“Release prevention barrier (RPB)” means a nonearthen barrier that is impermeable; composed of material compatible with oil stored in the AST; meets proper engineering strength and elasticity standards, and functions to prevent the discharge of stored oil to state lands, waters and storm drains. It must contain and channel any leaked oil in a manner that provides for early release detection through the required daily and weekly inspections.

“State waters” means all water, on the surface and under the ground, wholly or partially within or bordering the Commonwealth or within its jurisdiction.

“Storage capacity” means the total capacity of an AST or a container, whether filled in whole or in part with oil, a mixture of oil, or mixtures of oil with nonhazardous substances, or empty. An AST that has been permanently closed in accordance with this chapter has no storage capacity.

“Tank” means a device designed to contain an accumulation of oil and constructed of nonearthen materials, such as concrete, steel, or plastic, that provides structural support. This term does not include flow-through process tanks as defined in 40 CFR Part 280.

“Tank vessel” means any vessel used in the transportation of oil as bulk cargo.

“Upgrade” means an alteration of the performance, design, equipment or appurtenances of an AST or facility to meet a higher, new, or current standard.

“Vaulted tank” means any tank situated upon or above the surface of the floor in an underground area (such as an underground room, basement, cellar, mine-working, drift, shaft, tunnel or vault) providing enough space for physical inspection of the exterior of the tank.

“Vehicle” means any motor vehicle, rolling stock, or other artificial contrivance for transport whether self-propelled or otherwise, except vessels.

“Vessel” includes every description of watercraft or other contrivance used as a means of transporting on water, whether self-propelled or otherwise, and shall include barges and tugs.

9 VAC 25-91-20. Applicability.

A. The operator shall comply with all applicable requirements pursuant to this chapter. The operator as defined in this chapter, can be more than one person and each operator shares joint responsibility for compliance.

B. The requirements of this chapter may vary in their applicability to any given AST or facility depending on the part in which the requirement appears. The applicability of parts II, III, IV, and V are differentiated as follows:

1. The provisions of Part II (9 VAC 25-91-100 *et seq.*, Registration, Notification and Closure Requirements) of this chapter apply to: (i) an individual AST located within the Commonwealth of Virginia with an aboveground storage capacity greater than 660 gallons of oil, unless otherwise specified within this chapter; and (ii) all facilities in the Commonwealth of Virginia with an aggregate aboveground storage capacity greater than 1,320 gallons of oil, unless otherwise specified within this chapter.
2. The provisions of Part III (9 VAC 25-91-130 *et seq.*, Pollution Prevention Requirements) of this chapter apply to: (i) an individual AST located within the Commonwealth of Virginia with an aboveground storage capacity of 25,000 gallons or greater of oil, unless otherwise specified within this chapter; and (ii) all facilities in the Commonwealth of Virginia with an aggregate aboveground storage capacity of 25,000 gallons or greater of oil, unless otherwise specified within this chapter.
3. The provisions of part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) requirements) of this chapter apply to: (i) an individual AST located within the Commonwealth of Virginia with an aboveground storage capacity of 25,000 gallons or greater of oil, unless otherwise specified within this chapter; and (ii) all facilities in the Commonwealth of Virginia with an aggregate aboveground storage capacity of 25,000 gallons or greater of oil, unless otherwise specified within this chapter.
4. The provisions of Part V (9 VAC 25-91-180 *et seq.*, Groundwater Characterization Study (GCS) and GCS Monitoring Well Requirements) of this chapter apply to: (i) an individual AST located within the Commonwealth of Virginia with an aboveground storage capacity of one million gallons or greater of oil, unless otherwise specified within this chapter; and (ii) all facilities in the Commonwealth of Virginia with an aggregate aboveground storage capacity of one million gallons or greater of oil, unless otherwise specified within this chapter.

9 VAC 25-91-30. Exclusions.

A. The requirements of this chapter do not apply to:

1. Vessels;
2. Licensed motor vehicles, unless used solely for the storage of oil;
3. An AST with a storage capacity of 660 gallons or less of oil;
4. An AST containing petroleum, including crude oil or any fraction thereof, which is liquid at standard temperature and pressure (60°F at 14.7 pounds per square inch absolute) subject to and specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of § 101(14) of the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (42 USC § 9601 *et seq.*);
5. A wastewater treatment tank system that is part of a wastewater treatment facility regulated under § 402 or § 307(b) of the federal Clean Water Act (33 USC § 1251 *et seq.*);
6. An AST that is regulated by the Department of Mines, Minerals and Energy under Chapter 22.1 (§ 45.1-361.1 *et seq.*) of Title 45.1 of the Code of Virginia;
7. An AST used for the storage of products that are regulated pursuant to the federal Food, Drug, and Cosmetic Act (21 USC § 301 *et seq.*);
8. An AST that is used to store hazardous wastes listed or identified under Subtitle C of the Resource Conservation and Recovery Act (RCRA) (Solid Waste Disposal Act) (42 USC § 6901 *et seq.*), or a mixture of such hazardous wastes and other regulated substances;
9. An AST that is used to store propane gas, butane gas or other liquid petroleum gases;
10. An AST used to store nonpetroleum hydrocarbon-based animal and vegetable oils;
11. A liquid trap or associated gathering lines directly related to oil or gas production, or gathering operations;
12. A surface impoundment, pit, pond, or lagoon;
13. A stormwater or wastewater collection system;
14. Equipment or machinery that contains oil for operational purposes, including but not limited to lubricating systems, hydraulic systems, and heat transfer systems;
15. An AST used to contain oil for less than 120 days when: (i) used in connection with activities related to the containment and cleanup of oil; (ii) used by a federal, state or local entity in responding to an emergency; or (iii) used temporarily on-site to replace permanent capacity storage;
16. Oil-filled electrical equipment, including, but not limited to, transformers, circuit breakers or capacitors;
17. A flow-through process tank;

18. Oily water separators;
19. An AST containing dredge spoils;
20. An AST located on a farm or residence used for storing motor fuel for noncommercial purposes with an aggregate storage capacity of 1,100 gallons or less; or
21. Pipes or piping beyond the first valve from the AST that connects an AST with production process tanks or production process equipment.

B. In addition to the complete exclusions listed in subsection A of this section, the following are partially excluded from this chapter in that they need not comply with the requirements contained in Part III (9 VAC 25-91-130 *et seq.*, Pollution Prevention Requirements) of this chapter:

1. An AST with a capacity of 5,000 gallons or less used for storing heating oil for consumptive use on the premises where stored;
2. An AST storing asphalt and asphalt compounds which are not liquid at standard conditions of temperature and pressure (60EF at 14.7 pounds per square inch absolute); and
3. Line pipe and breakout tanks of an interstate pipeline regulated under the federal Accountable Pipeline Safety and Partnership Act of 1996 (49 USC § 60101 *et seq.*).

C. In addition to the exclusions listed in subsections A and B of this section, asphalt and asphalt compounds which are not liquid at standard conditions of temperature and pressure (60EF at 14.7 pounds per square inch absolute) are excluded for the purposes of any requirement to install groundwater monitoring wells or groundwater protection devices or to conduct groundwater characterization studies under Part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) Requirements) and Part V (9 VAC 25-91-180 *et seq.*, Groundwater characterization study (GCS) and GCS well monitoring requirements) of this chapter.

9 VAC 25-91-40. Compliance dates.

A. Every operator shall comply with this chapter on its effective date unless a later date is otherwise specified.

B. Operators of facilities exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., facilities not engaged in the resale of oil) having an aboveground storage capacity of 25,000 gallons or greater of oil shall comply with Part III (9 VAC 25-91-130 *et seq.*, Pollution Prevention Requirements) of this chapter within 120 days after the effective date of this chapter unless otherwise specified in this chapter. If compliance with Part III of this chapter necessitates extensive upgrades to the existing facility design, these exempted operators may submit a proposed extended compliance schedule and supporting explanation to the board no later than 90 days after the effective date of this chapter. The board may approve an extended compliance schedule where the circumstances so warrant.

C. Operators of existing ASTs and facilities previously registered in accordance with the requirements of § 62.1-44.34:19.1 of the Code of Virginia shall not have to resubmit the registration form until five years from the date of the initial registration unless title to that AST or

facility is transferred (i.e., change of ownership) or the AST is converted or brought back into use after permanent closure, whichever occurs first.

D. Operators of facilities subject to Part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) Requirements) of this chapter that are brought into use after the effective date of this chapter shall submit a complete application meeting all applicable requirements of this chapter no later than 90 days prior to commencement of operations.

1. The operator must receive approval of the ODCP by DEQ prior to commencement of facility operations.

2. The operators of facilities that have previously met the provisions of § 62.1-44.34:15 of the Code of Virginia for ODCP submittal shall not be required to resubmit the ODCP until 90 days prior to the date that plan's approval expires. Ninety days prior to the expiration of approval of the ODCP, the facility operator shall submit an updated plan or certification of renewal of an existing plan according to 9 VAC 25-91-170 F.

E. As of July 1, 1997, an operator having obtained approval of the ODCP shall operate, maintain, monitor, and keep records pertaining to 9 VAC 25-91-170 A 18 of Part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) Requirements) of this chapter and under the provisions of Part III (9 VAC 25-91-130 *et seq.*, Pollution Prevention Requirements) of this chapter.

9 VAC 25-91-50. Statement of purpose.

The purpose of this chapter is to: (i) establish requirements for registration of facilities and individual ASTs located within the Commonwealth; (ii) provide the board with the information necessary to identify and inventory facilities with an aggregate storage capacity of greater than 1,320 gallons of oil or individual ASTs with a storage capacity of greater than 660 gallons of oil; (iii) develop standards and procedures for operators of facilities with an aggregate aboveground storage capacity of 25,000 gallons or greater of oil relating to the prevention of pollution from new and existing aboveground storage tanks; (iv) provide requirements for the development of facility oil discharge contingency plans for facilities with an aggregate aboveground storage capacity of 25,000 gallons or greater of oil that will ensure that the applicant can take such steps as are necessary to protect environmentally sensitive areas, to respond to the threat of an oil discharge, and to contain, clean up and mitigate an oil discharge within the shortest feasible time, where plans must address concerns for the effect of oil discharges on the environment as well as considerations of public health and safety; and (v) provide requirements for facilities and individual ASTs with an aggregate aboveground storage capacity of one million gallons or greater of oil to conduct a groundwater characterization study (GCS) within the geographic boundaries of a facility; to submit the GCS as part of the oil discharge contingency plan; to conduct a monthly gauging and inspection of GCS monitoring wells, monitoring of well headspace and sampling and laboratory analysis of GCS monitoring wells; and to gather all observations and data maintained at the facility and compile and submit them as an annual report to the board.

9 VAC 25-91-60. Administrative fees.

A. Fees are assessed for review of oil discharge contingency plans and for registration of an AST

or a facility according to the schedules contained in subsection B and C of this section. A registration form or an application for review of a contingency plan will not be accepted unless the required fee has been received by the department.

1. Fees shall be paid in United States currency by check, draft, or postal money order made payable to the Treasurer of Virginia.
2. The fee, together with the form or plan, shall be sent to the department at the following mailing address:

Department of Environmental Quality

Office of Financial Management

P.O. Box 10150

Richmond, VA 23240

3. Notifications and correspondence for which a fee is not applicable should be mailed to the department as specified in 9 VAC 25-91-70.

B. Facility and AST registration.

1. Registration fees shall be submitted for the following:
 - a. Initial registration;
 - b. New installations;
 - c. Conversion (i.e., UST to an AST, storing a nonoil to an oil product etc.);
 - d. AST brought back into use after permanent closure;
 - e. Registration renewal (every five years); or
 - f. When title to a facility or AST is transferred (change of ownership).
2. Registration fees are as follows:
 - a. An Individual AST (new, existing, replaced or brought back into use after permanent closure) = \$25;
 - b. One facility with one AST = \$25;
 - c. One facility with two or more ASTs = \$50;
 - d. Two facilities with one AST at each facility = \$50;
 - e. Two facilities with one AST at the first facility and two or more at the other = \$75;
 - f. Two or more facilities with two or more ASTs each = \$100;
 - g. Three facilities with one AST each = \$75; or
 - h. Three facilities with two or more ASTs at the first facility and one AST at each other facility = \$100.

3. An operator of an AST subject to the registration requirements of this chapter shall submit a fee of \$25 to the board for each such AST up to a maximum of \$50 per facility. An operator of a single facility shall submit a maximum of \$50 for the facility and all ASTs. An operator of multiple facilities shall submit a maximum fee of \$100 to the board to register all of their facilities and ASTs.

4. Registration forms will not be accepted by the board as complete unless the applicable fee has been paid. No fee is required for a “notification” of an AST replacement (i.e., relocation of existing AST), upgrade, repair, or closure.

C. ODCP application.

1. ODCP application fees are as follows:

a. For a facility with an aggregate aboveground maximum storage or handling capacity from 25,000 gallons up to and including 100,000 gallons of oil the fee is \$718;

b. For a facility with an aggregate aboveground maximum storage or handling capacity from 100,001 gallons up to one million gallons of oil the fee is \$2,155;

c. For a facility with an aggregate aboveground maximum storage or handling capacity of one million gallons or greater of oil the fee is \$3,353; or

d. For a pipeline, the ODCP application fee shall be based on the average daily throughput of oil. Once that volume is determined, the ODCP application fee will be calculated per subdivisions a, b and c of this subdivision.

2. The fee for approval of a contingency plan encompassing more than one facility as described in 9 VAC 25-91-170 D shall be based on the aggregate aboveground storage capacity of the facilities.

3. Fees shall only be paid upon initial submittal of an oil discharge contingency plan by an operator. Renewals, additions, deletions or changes to the plan are not subject to the administrative fee.

4. Application fees are refundable upon receipt of a written request to withdraw the ODCP application provided the request is received no later than 30 days after submittal and prior to the department’s review of the contingency plan.

5. Overpayments of application fees are refundable upon written request.

9 VAC 25-91-70. Notices to the Department of Environmental Quality (DEQ)

All written correspondence to the Department of Environmental Quality related to the requirements of this chapter, with the exceptions of (i) the correspondence which contains fees and therefore must be paid directly to the Treasurer of Virginia as specified in 9 VAC 25-91-60 A and (ii) variance petitions as specified in 9 VAC 25-91-160 shall be addressed to the cognizant DEQ regional office. A list of Regional Offices and their addresses are available from the central office at the following address:

Mailing Address:

Department of Environmental Quality
Office of Spill Response and Remediation
P.O. Box 10009
Richmond, VA 23240-0009

Street Address:

Department of Environmental Quality
Office of Spill Response and Remediation
629 E. Main Street
Richmond, VA 23219

9 VAC 25-91-80. Delegation of authority.

The executive director, or his designee, may perform any act of the board under this chapter, except as limited by § 62.1-44.14 of the Code of Virginia.

9 VAC 25-91-90. Evaluation of chapter.

A. Within three years after the effective date of this chapter, the department shall perform an analysis on this chapter and provide the board with a report on the results. The analysis shall include (i) the purpose and need for the chapter; (ii) alternatives which would achieve the stated purpose of this chapter in a less burdensome and less intrusive manner; (iii) an assessment of the effectiveness of this chapter; (iv) the results of a review of current state and federal statutory and regulatory requirements, including identification and justification of requirements of this chapter which are more stringent than federal requirements; and (v) the results of a review as to whether this chapter is clearly written and easily understandable by affected entities.

B. Upon review of the department's analysis, the board shall confirm the need to (i) continue this chapter without amendments, (ii) repeal this chapter or (iii) amend this chapter. If the board's decision is to repeal or amend this chapter, the board shall authorize the department to initiate the applicable regulatory process to carry out the decision of the board.

PART II.

REGISTRATION, NOTIFICATION AND CLOSURE REQUIREMENTS.

9 VAC 25-91-100. Registration requirements.

A. Section 62.1-44.34:19.1 of the Code of Virginia requires an operator of a facility located within the Commonwealth with an aggregate aboveground storage capacity of more than 1,320 gallons of oil or an operator of an individual AST located within the Commonwealth with a storage capacity of more than 660 gallons of oil to register such facility or AST with the board and with the local director or coordinator of emergency services unless otherwise specified within this chapter.

B. Although the term “operator” includes a variety of persons who may share joint responsibility for compliance with this chapter, in fixing responsibility for compliance with the registration requirements, DEQ shall look first to the owner or a duly authorized representative of the facility or AST.

C. A duly authorized representative may submit the registration on the owner’s behalf.

1. A person is a duly authorized representative only if:

- a. The authorization is made in writing by the owner and indicates that the representative has signatory authority for the registration;
- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity (e.g., the plant manager, the operator of a facility or an AST, the superintendent, or a position of equivalent responsibility), or specifies an individual or a position having overall responsibility for environmental matters for the facility or company. A duly authorized representative thus may be either a named individual or any individual occupying a named position; and
- c. The written authorization is submitted to the department along with the registration form.

2. Changes to authorization.

If an authorization previously submitted is no longer accurate because a different individual or position has assumed responsibility for the overall operation of the facility, or for environmental matters a new authorization satisfying the requirements shall be submitted to the department prior to or together with any reports or information signed by that duly authorized representative.

3. Certification.

Any person signing a registration document shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based

on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.”

D. The owner or a duly authorized representative of a new facility or AST, a converted facility or AST, or a facility or AST brought back into use after permanent closure shall register such facility or AST with the board and local director or coordinator of emergency services within 30 days after being brought into use.

E. Registration shall include the following information and other information that may be required if approved by the board:

1. Facility and AST owner and operator information (e.g., name, address, and phone numbers);
2. Facility information (e.g., name, type, address, contact person and phone numbers, and aggregate storage capacity);
3. Tank and piping information (e.g., storage capacity, product stored, type of design and construction standards);
4. Other information that may be reasonably requested by the board; and
5. Owner certification of information.

F. The owner or a duly authorized representative of the facility or AST shall renew the registration required by this section every five years or whenever title to the facility or AST is transferred (change of ownership), whichever occurs first.

G. A facility or AST installed after the effective date of this chapter, including an AST or facility operated by the federal government, shall not be registered without either (i) a review by the department of the permits, inspections, and certification of use required in accordance with the provisions of the Uniform Statewide Building Code, the BOCA® National Building Code and NFPA Code and obtained by the owner or a duly authorized representative from the local code officials or their designee or (ii) an inspection by the department. In the case of a regulated AST operated by the Commonwealth, the Department of General Services shall function as the local code official in accordance with § 36-98.1 of the Code of Virginia.

9 VAC 25-91-110. Notifications.

A. An owner or a duly authorized representative of the facility or AST shall notify the board within 30 days after any AST:

1. Upgrade;
2. Major repair;
3. Replacement (i.e., relocating or repositioning of an existing AST); or

4. Change in service (i.e., change in operation, conditions of the stored product, specific gravity, corrosivity, temperature or pressure that has occurred from the original that may affect the tank's suitability for service).

B. Notifications do not require a fee.

9 VAC 25-91-120. Aboveground storage tank closure.

A. After the effective date of this chapter, a facility or AST, including a facility or AST operated by the federal government, shall not be permanently closed without being registered and the fee paid and either (i) having a review performed by the department of the permits and inspections required in accordance with the provisions of the Uniform Statewide Building Code, the BOCA® National Building Code, and NFPA Code obtained by the owner or a duly authorized representative from the local code official or his designee or (ii) being inspected by the department.

1. For inspections by the department (e.g., where a permit is not issued by the local code official or his designee), at least 14 days notice to the department is required prior to the commencement of closure operations. Notice shall be made by the owner or a duly authorized representative.

2. In the case of a regulated AST operated by the Commonwealth, the Department of General Services shall function as the local code official in accordance with § 36-98.1 of the Code of Virginia.

3. If the closure is in response to containment and cleanup actions that necessitate AST removal, the owner or a duly authorized representative of the facility or AST shall immediately notify the local code official and the department.

B. Closure operations shall be reported to the department by the owner or a duly authorized representative within 30 days after the permanent closure operation is completed.

C. Closure operations shall include the following:

1. Removal of all liquids, sludges, and vapors from the AST and associated piping. All wastes removed shall be disposed of in accordance with all applicable state and federal requirements.

2. For tanks being closed in place, the tank shall be rendered vapor free. Provisions must be made for adequate ventilation to ensure that the tank remains vapor free. Vent lines shall remain open and maintained in accordance with the applicable codes. All access openings shall be secured (normally with spacers to assist ventilation). The AST shall be secured against tampering and flooding. The name of the product last stored, the date of permanent closure and PERMANENTLY CLOSED shall be stenciled in a readily visible location on the AST. Piping shall be disconnected. All pipes being closed in place shall be vapor free and capped or blind flanged.

3. An assessment of the AST site shall be conducted prior to completion of permanent closure operations.

a. In conducting the assessment, the owner or a duly authorized representative shall sample and test for the presence of petroleum hydrocarbons at the AST site in any area where contamination is likely to have occurred. These locations shall be subject to the review of the board. Sampling and testing shall be conducted in accordance with established EPA-approved analytical methods or other methods approved by the board.

(1) The owner or a duly authorized representative shall submit copies of the laboratory results, a description of the area sampled, a photograph of the site indicating sampled areas, and a site map indicating the location of the closed AST and associated piping as attachments to the closure form.

(2) If contaminated soils, contaminated groundwater, free product as a liquid or vapor, or other evidence of a release is discovered, the owner or a duly authorized representative shall immediately notify the board and conduct the cleanup in accordance with department requirements.

b. The department may consider an alternative to the soil sampling requirements of this subsection if the owner or a duly authorized representative of the AST demonstrates to the board's satisfaction that:

(1) There is no evidence of present or past contamination by providing records of monthly leak detection monitoring for the previous 12 months; and

(2) The facility or AST has operated an approved leak detection system.

4. A closure inspection conducted by either the department or the local building official, as discussed in subsection A of this section.

D. When deemed necessary by the board, the owner or a duly authorized representative of a facility or an AST that was permanently closed prior to the effective date of this chapter shall assess the site and close the AST in accordance with the requirements of this section.

E. The owner or a duly authorized representative shall maintain all records relating to compliance with this section for a period of not less than five years from the date the board receives notice of the completed closure. These records shall be made available to the board upon request.

PART III.

POLLUTION PREVENTION REQUIREMENTS.

9 VAC 25-91-130. Pollution prevention standards and procedures.

A. Section 62.1-44.34:15.1 of the Code of Virginia provides the following requirements for existing aboveground storage tanks at a facility with an aggregate aboveground storage capacity of one million gallons or greater of oil or for an existing individual aboveground storage tank with a storage capacity of one million gallons or greater of oil, unless otherwise exempted.

1. Inventory control and testing for significant variations.

a. The following aboveground storage tanks shall not be subject to inventory control and testing for significant variations:

- (1) Aboveground storage tanks totally off ground with all associated piping off ground;
- (2) Aboveground storage tanks with a capacity of 5,000 gallons or less located within a building or structure designed to fully contain a discharge of oil; and
- (3) Aboveground storage tanks containing No. 5 or No. 6 oil for consumption on the premises where stored.

b. Each operator shall institute inventory control procedures capable of detecting a significant variation of inventory. A significant variation shall be considered a variation in excess of 1.0% of the storage capacity of each individual AST. For a refinery, a significant variation of inventory shall be considered a loss in excess of 1.0% by weight of the difference between the refinery's input and output. Reconciliations of inventory measurements shall be conducted monthly. If the significant variation persists for two consecutive reconciliation periods, the operator shall conduct an investigation to determine the cause of the variation. This investigation shall be completed within five working days of the end of the second reconciliation period. If this investigation does not reveal the cause of the inventory variation, the operator shall notify the board and the local director or coordinator of emergency services and shall conduct additional testing to determine the cause of the inventory variation. The testing method, schedule, and results of this additional testing shall be submitted to the board for review.

c. Inventory records shall be kept of incoming and outgoing volumes of oil from each tank. All tanks shall be gauged no less frequently than once every 14 days and on each day of normal operation. Physical measurements shall be reconciled to 60EF at 14.7 pounds per square inch absolute.

2. Formal inspections.

a. Each AST shall undergo formal external and internal tank inspections. The initial formal internal and external inspections for an existing AST shall be

completed on or before June 30, 1998, unless otherwise specified within this chapter.

(1) All newly installed ASTs shall have initial formal inspections within five years after the date of installation.

(2) Operators of facilities exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall complete the initial formal inspections within five years of the effective date of this chapter.

(3) An AST with a storage capacity of less than 12,000 gallons shall not be subject to the formal internal inspection unless the integrity of the AST is in question and an inspection is deemed necessary by the board.

b. Inspections shall be conducted in accordance with the provisions of API Standard 653 or procedure approved by the board. If construction practices allow external access to the tank bottom, a formal external inspection utilizing accepted methods of nondestructive testing or procedure approved by the board may be allowed in lieu of the internal inspection. An AST with a release prevention barrier or liner installed shall be internally inspected in accordance with the applicable provisions of API Standard 653 or API Recommended Practice 652 or procedure accepted by the board.

c. An API Standard 653 inspection conducted between January 1, 1991, and the effective date of this chapter may be accepted by the board if the operator provides supporting documentation to the board for review and approval.

3. Formal reinspections.

a. Each AST shall undergo an external reinspection every five years in accordance with the provisions of API Standard 653 after the initial formal external inspection has been conducted.

b. Each AST with a storage capacity of 12,000 gallons of oil or greater shall undergo an internal reinspection in accordance with the provisions of API Standard 653 every 10 years after the initial formal internal inspection has been conducted.

(1) The board may require the internal reinspection sooner than 10 years if there is an indication that the corrosion rate established by the initial internal inspection or a subsequent reinspection has increased.

(2) The internal reinspection period may be extended beyond 10 years if the operator can demonstrate to the board that an extension of the reinspection period is warranted. The operator shall provide supporting documentation to the board for review and approval at least six months prior to the date the reinspection is due.

c. An AST with a storage capacity of less than 12,000 gallons shall not be subject to the formal internal reinspection unless the integrity of the AST is in question and

an inspection is deemed necessary by the board.

4. Secondary containment.

Each secondary containment dike or berm shall be maintained and evaluated or certified with respect to its compliance with the applicable requirements of 40 CFR Part 112 (1997), NFPA 30, and 29 CFR 1910.106. The operator shall have this evaluation or certification performed by a professional engineer or person approved by the board on or before June 30, 1998, and every 10 years thereafter, unless otherwise exempted.

a. Operators of facilities exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall have this evaluation completed within five years after the effective date of this chapter and every 10 years thereafter.

b. Operators of a newly installed AST shall have this evaluation completed prior to being placed into service and every 10 years thereafter.

5. Safe fill and shutdown procedures.

a. Each operator shall institute safe fill, shutdown and transfer procedures or equivalent measures established by the board, that will ensure that spills resulting from tank overfills or other product transfer operations do not occur.

(1) All receipts of oil shall be authorized by the operator or facility personnel trained by the operator who shall ensure the volume available in the tank is greater than the volume of oil to be transferred to the tank before the transfer operation commences. The operator shall ensure the transfer operation is monitored continually, either by manual or automatic means, until complete. The operator shall ensure that all tank fill valves not in use are secured and that only the tank designated is receiving oil.

(2) If unattended during transfer operations, the AST shall be equipped with a high level alarm or other appropriate mechanism approved by the board that will immediately alert the operator to prevent an overfill event. Activation of the high level alarm or other appropriate mechanism shall initiate an immediate and controlled emergency shutdown of the transfer, either by manual or automatic means. Each operator shall include this emergency shutdown procedure in the facility records and shall ensure that all facility personnel involved in the transfer operation are trained in this procedure. The alarm shall consist of a visual and audible device capable of alerting the operator, both by sight and hearing, to prevent an overfill situation. If the operator is in a control station, this alarm shall cause a warning light and audible signal in that station to activate. In addition, this system shall alarm on failure, malfunction or power loss. This high level alarm shall be tested prior to each receipt of oil. Records of testing shall be maintained at the facility.

b. All oil transfer areas where filling connections are made with vehicles shall be

equipped with a spill containment system capable of containing and collecting those spills and overfills. The containment system shall be designed to hold at least the capacity as required by 40 CFR Part 112 (1997) (e.g., the maximum capacity of any single compartment of a vehicle loaded or unloaded in the transfer area).

c. If installed, an automatic shutdown system utilized during transfer of oil shall include the capability to direct the flow of oil to another tank capable of receiving the transferred oil or the capability to shut down the pumping or transfer system. This automatic shutdown system shall be tested prior to each receipt of oil and records of testing shall be maintained at the facility.

d. All ASTs shall be equipped with a gauge that is readily visible and indicates the level of oil or quantity of oil in the tank. In addition, the storage capacity, product stored and tank identification number shall be clearly marked on the tank at the location of the gauge. These gauges shall be calibrated annually.

6. Cathodic protection of piping and pressure testing of piping.

a. The requirement for cathodic protection of piping shall apply to buried piping only. Cathodic protection shall be installed and maintained in accordance with the following applicable publications: API 1632, NFPA 30, NACE 0169, or NACE 0285. All piping above ground shall be protected from corrosion using methods and procedures referenced in NFPA 30, Chapter 2, Section 2-4.3 or a procedure approved by the board. Piping that passes through the wall of the containment berm or dike or under road crossings shall be protected from corrosion and damage using practices recommended in the publications listed in this subdivision.

b. All piping shall be pressure tested as specified in this subsection or using an equivalent method or measure approved by the board at intervals not to exceed five years. The operator of an existing facility or AST shall complete the initial test on or before June 30, 1998 except operators of existing facilities or ASTs for which compliance was exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil). These excepted operators shall complete the initial test within five years after the effective date of this chapter. All newly installed or repaired piping shall be tested before being placed into service.

(1) A pressure test may be a hydrostatic test at 150% maximum allowable working pressure (MAWP) or an inert gas test at 110% MAWP.

(2) A test conducted and certified by an API authorized piping inspector to be in conformity with the API 570 Piping Inspection Code is deemed an equivalent method of testing approved by the board.

(3) The board may consider on a case-by-case basis requests for approval of other equivalent methods or measures which conform to industry recommended practices, standards and codes. The operator shall submit a request for approval of a proposed equivalent method or measure to the board as per 9 VAC 25-91-160.

7. Visual daily inspection and weekly inspections.

a. The operator or a duly authorized representative shall conduct a daily visual inspection for each day of normal operation in the areas of the facility where this chapter applies. The facility person conducting the inspection shall document completion of this inspection by making and signing an appropriate notation in the facility records. This visual inspection shall include the following:

- (1) A complete walk-through of the facility property in the areas where this chapter applies to ensure that no hazardous conditions exist;
- (2) An inspection of ground surface for signs of leakage, spillage, or stained or discolored soils;
- (3) A check of the berm or dike area for excessive accumulation of water and to ensure the dike or berm manual drain valves are secured;
- (4) A visual inspection of the exterior tank shell to look for signs of leakage or damage; and
- (5) An evaluation of the condition of the aboveground storage tank and appurtenances.

b. The operator or a duly authorized representative shall conduct a weekly inspection of the facility in the areas where this chapter applies, using a checklist that contains at least the items found in the weekly inspection checklist subdivision of this section. The checklist is not inclusive of all safety or maintenance procedures but is intended to provide guidance to the requirements within this chapter. The weekly checklist shall be maintained at the facility and provided to the board upon request. This checklist shall be signed and dated by the facility person or persons conducting the inspection and shall become part of the facility record.

- (1) The operator of a new AST/facility shall develop the checklist within 90 days after the date of installation.
- (2) The operator of each facility exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall develop the checklist within 90 days after the effective date of this chapter.
- (3) Operators of facilities not exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) and who have developed a checklist within 90 days after June 30, 1993, shall be deemed to be in compliance with this checklist requirement as of the effective date of this chapter.

c. Sample - weekly inspection checklist for aboveground storage tank systems:

- ____ (1) Containment dike or berm in satisfactory condition.
- ____ (2) Containment area free of excess standing water or oil.

- ____ (3) Gate valves used for emptying containment areas secured.
- ____ (4) Containment area/base of tank free of high grass, weeds, and debris.
- ____ (5) Tank shell surface, including any peeling areas, welds, rivets/bolts, seams, and foundation, visually inspected for areas of rust and other deterioration.
- ____ (6) Ground surface around tanks and containment structures and transfer areas checked for signs of leakage.
- ____ (7) Leak detection equipment in satisfactory condition.
- ____ (8) Separator or drainage tank in satisfactory condition.
- ____ (9) Tank water bottom drawoffs not in use are secured.
- ____ (10) Tank fill valves not in use are secured.
- ____ (11) Valves inspected for signs of leakage or deterioration.
- ____ (12) Inlet and outlet piping and flanges inspected for leakage.
- ____ (13) All tank gauges have been inspected and are operational.

Signature of Inspector

Date

Time

8. Training of individuals.

To ensure proper training of individuals conducting inspections required by subdivision 7 of this subsection, the operator of a facility shall train personnel based on the following requirements:

a. Each facility operator shall establish a training program for those facility personnel conducting the daily visual and weekly inspections of the facility. Facility records shall contain the basic information and procedures required by subdivision 8 c of this subsection (i.e., 9 VAC 25-91-130 A 8 c). The required training may be conducted by the operator or by a third party. The training program established shall be maintained to reflect current conditions of the facility.

(1) The operator of a new facility shall establish the training program within six months after being brought into use.

(2) The operator of each facility exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall establish the training program within six months after the effective date of this chapter.

(3) Operators of facilities not exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the

resale of oil) and who have developed a training program within six months after June 30, 1993, shall be deemed to be in compliance with this training program requirement as of the effective date of this chapter so long as that program reflects current conditions of the facility.

b. The required training shall be conducted for facility personnel as applicable . Personnel not receiving this initial training and who will be conducting these inspections shall receive the training prior to conducting any inspection.

(1) The operator of a new facility shall conduct the personnel training within 12 months after being brought into use and prior to personnel conducting any inspection.

(2) The operator of each facility exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall conduct the personnel training within 12 months after the effective date of this chapter.

(3) Operators of facilities not exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) and who have conducted the personnel training within 12 months after June 30, 1993, shall be deemed to be in compliance with this personnel training requirement as of the effective date of this chapter, so long as the training provided reflects current conditions of the facility and all inspections are current.

c. Training for personnel performing daily and weekly inspections shall address at a minimum:

(1) Basic information regarding occupational safety, hazard recognition, personnel protection, and facility operations;

(2) The procedures to be followed in conducting the daily visual and weekly facility inspections;

(3) The procedures to be followed upon recognition of a hazard or the potential for a hazard; and

(4) The procedure for evaluating the condition of the aboveground storage tank and appurtenances.

d. The operator of a facility shall train facility personnel upon any changes to the contents of the initial training program or every three years and document this training in the facility records.

e. All formal inspections and testing required by subdivision 2 of this subsection shall be conducted by a person certified to conduct the inspection or test. This certification shall be accomplished in accordance with the provisions of API Standard 650 and API Standard 653 or a

procedure approved by the board. Proof of this certification shall be maintained in the facility records. The results of all tests and inspections required by subdivision 2 of this subsection shall be maintained at the facility or at a location approved by the board for the life of the tank, but for no less than five years.

9. Leak detection.

The operator shall operate, maintain, monitor and keep records of the system established for early detection of a discharge to groundwater (i.e., a method of leak detection) as required by 9 VAC 25-91-170 A 18 and contained in the facility's approved ODCP. These activities shall be inspected and approved by the department.

B. Section 62.1-44.34:15.1 of the Code of Virginia provides the following requirements for existing aboveground storage tanks at facilities with an aggregate aboveground storage capacity of less than one million gallons but equal to or more than 25,000 gallons of oil or for an existing individual aboveground storage tank with a storage capacity of less than one million but equal to or more than 25,000 gallons of oil, unless otherwise exempted.

1. Inventory control and testing for significant variations.

a. The following aboveground storage tanks shall not be subject to inventory control and testing for significant variations:

- (1) Aboveground storage tanks totally off ground with all associated piping off ground;
- (2) Aboveground storage tanks with a capacity of 5,000 gallons or less located within a building or structure designed to fully contain a discharge of oil; and
- (3) Aboveground storage tanks containing No. 5 or No. 6 oil for consumption on the premises where stored.

b. Each operator shall institute inventory control procedures capable of detecting a significant variation of inventory. A significant variation shall be considered a variation in excess of 1.0% of the storage capacity of each individual AST. For a refinery, a significant variation of inventory shall be considered a loss in excess of 1.0% by weight of the difference between the refinery's input and output. Reconciliations of inventory measurements shall be conducted monthly. If the significant variation persists for two consecutive reconciliation periods, the operator shall conduct an investigation to determine the cause of the variation. This investigation shall be completed within five working days of the end of the second reconciliation period. If this investigation does not reveal the cause of the inventory variation, the operator shall notify the board and the local director or coordinator of emergency services and shall conduct additional testing to determine the cause for the inventory variation. The testing method, schedule, and results of this additional testing shall be submitted to the board for review.

c. Inventory records shall be kept of incoming and outgoing volumes of oil from

each tank. All tanks shall be gauged no less frequently than once every 14 days and on each day of normal operation. Physical measurements shall be reconciled to 60EF at 14.7 pounds per square inch absolute.

2. Secondary containment.

Each secondary containment dike or berm shall be maintained and evaluated or certified to be in compliance with the applicable requirements of 40 CFR Part 112 (1997), NFPA 30, and 29 CFR Part 1910.106. The operator shall have this evaluation or certification performed by a professional engineer or person approved by the board on or before June 30, 1998, and every 10 years thereafter, unless otherwise exempted.

a. Operators of facilities exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall have this evaluation completed within five years after the effective date of this chapter and every 10 years thereafter.

b. Operators of a newly installed AST shall have this evaluation completed prior to being placed into service and every 10 years thereafter.

3. Safe fill and shutdown procedures.

a. Each operator shall institute safe fill, shutdown and transfer procedures, or equivalent measures established by the board, that will ensure that spills resulting from tank overfills or other product transfer operations do not occur. All receipts of oil shall be authorized by the operator or facility personnel trained by the operator who shall ensure the volume available in the tank is greater than the volume of oil to be transferred to the AST before the transfer operation commences. The operator shall ensure the transfer operation is monitored continually, either by manual or automatic means, until complete. The operator shall ensure that all tank fill valves not in use are secured and that only the tank designated is receiving oil.

b. All oil transfer areas where filling connections are made with vehicles shall be equipped with a spill containment system capable of containing and collecting those spills and overfills. The containment system shall be designed to hold at least the capacity as required by 40 CFR Part 112 (1997) (e.g., the maximum capacity of any single compartment of a vehicle loaded or unloaded in the transfer area).

c. If installed, an automatic shutdown system utilized during transfer of oil shall include the capability to direct the flow of oil to another tank capable of receiving the transferred oil or the capability to shut down the pumping or transfer system. This automatic shutdown system shall be tested prior to each receipt of oil and records of testing shall be maintained at the facility.

d. All ASTs shall be equipped with a gauge that is readily visible and indicates the level of oil or quantity of oil in the tank. In addition, the storage capacity and tank identification number shall be clearly marked on the tank at the location of the gauge. These gauges shall be calibrated annually.

4. Pressure testing of piping.

All piping shall be pressure tested using an equivalent method or measure approved by the board, at intervals not to exceed five years. The operator of an existing facility or AST shall complete the initial test on or before June 30, 1998 except operators of existing facilities or ASTs for which compliance was exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil). These excepted operators shall complete the initial test within five years after the effective date of this chapter. All newly installed or repaired piping shall be tested before being placed into service.

- a. A pressure test may be a hydrostatic test at 150% maximum allowable working pressure (MAWP), or an inert gas test at 110% MAWP.
- b. A test conducted and certified by an API authorized piping inspector to be in conformity with the API 570 Piping Inspection Code is deemed an equivalent method of testing approved by the board.
- c. The board may consider on a case-by-case basis requests for approval of other equivalent methods or measures which conform to industry recommended practices, standards and codes. The operator shall submit a request for approval of a proposed equivalent method or measure to the board as specified in 9 VAC 25-91-160.

5. Visual daily inspection and weekly inspections.

a. The operator or a duly authorized representative shall conduct a daily visual inspection for each day of normal operation in the areas of the facility where this chapter applies. The facility person conducting the inspection shall document completion of this inspection by making and signing an appropriate notation in the facility records. This visual inspection shall include the following:

- (1) A complete walk-through of the facility property in the areas where this chapter applies to ensure that no hazardous conditions exist;
- (2) An inspection of the ground surface for signs of leakage, spillage, or stained or discolored soils;
- (3) A check of the berm or dike area for excessive accumulation of water and to ensure the dike or berm manual drain valves are secured;
- (4) A visual inspection of the exterior tank shell to look for signs of leakage or damage; and
- (5) An evaluation of the condition of the aboveground storage tank and appurtenances.

b. The operator or a duly authorized representative shall conduct a weekly inspection of the facility in the areas where this chapter applies, using a checklist which contains at least the items found in the weekly inspection checklist subdivision of this section. The checklist is not inclusive of all safety or

maintenance procedures but is intended to provide guidance to the requirements within this chapter. The weekly checklist shall be maintained at the facility and provided to the board upon request. This checklist shall be signed and dated by the facility person or persons conducting the inspection and shall become part of the facility record.

(1) The operator of a new AST/facility shall develop the checklist within 90 days after the date of installation.

(2) The operator of each facility exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall develop the checklist within 90 days after the effective date of this chapter.

(3) Operators of facilities not exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) and who have developed a checklist within 90 days after June 30, 1993, shall be deemed to be in compliance with this checklist requirement as of the effective date of this chapter.

c. Sample - weekly inspection checklist for aboveground storage tank systems:

- ____ (1) Containment dike or berm in satisfactory condition.
- ____ (2) Containment area free of excess standing water or oil.
- ____ (3) Gate valves used for emptying containment areas secured.
- ____ (4) Containment area/base of tank free of high grass, weeds, and debris.
- ____ (5) Tank shell surface, including any peeling areas, welds, rivets/bolts, seams, and foundation, visually inspected for areas of rust and other deterioration.
- ____ (6) Ground surface around tanks and containment structures and transfer areas checked for signs of leakage.
- ____ (7) Leak detection equipment in satisfactory condition.
- ____ (8) Separator or drainage tank in satisfactory condition.
- ____ (9) Tank water bottom drawoffs not in use are secured.
- ____ (10) Tank fill valves not in use are secured.
- ____ (11) Valves inspected for signs of leakage or deterioration.
- ____ (12) Inlet and outlet piping and flanges inspected for leakage.
- ____ (13) All tank gauges have been inspected and are operational.

Signature of Inspector

Date

Time

6. Training of individuals.

To ensure proper training of individuals conducting inspections required by subdivision 5 of this subsection, the operator of a facility shall train personnel based on the following requirements:

a. Each facility operator shall establish a training program for those facility personnel conducting the daily visual and weekly inspections of the facility. Facility records shall contain the basic information and procedures required by subdivision 6 c of this subsection (i.e., 9 VAC 25-91-130 B 6 c). The required training may be conducted by the operator or by a third party. The training program established shall be maintained to reflect current conditions of the facility.

(1) The operator of a new facility shall establish the training program within six months after being brought into use.

(2) The operator of each facility exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall establish the training program within six months after the effective date of this chapter.

(3) Operators of facilities not exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) and who have developed a training program within six months after June 30, 1993, shall be deemed to be in compliance with this training program requirement as of the effective date of this chapter so long as that program reflects current conditions of the facility.

b. The required training shall be conducted for facility personnel as applicable. Personnel not receiving this initial training and who will be conducting these inspections shall receive the training prior to conducting any inspection.

(1) The operator of a new facility shall conduct the personnel training within 12 months after being brought into use and prior to personnel conducting any inspection.

(2) The operator of each facility exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall conduct the personnel training within 12 months after the effective date of this chapter.

(3) Operators of facilities not exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) and who have conducted the personnel training within 12 months after June 30, 1993, shall be deemed to be in compliance with this personnel training requirement as of the effective date of this chapter, so long as the training provided reflects current

conditions of the facility and all inspections are current.

c. Training for personnel performing daily and weekly inspections shall address at a minimum:

- (1) Basic information regarding occupational safety, hazard recognition, personnel protection, and facility operations;
- (2) The procedures to be followed in conducting the daily visual and weekly facility inspections;
- (3) The procedures to be followed upon recognition of a hazard or the potential for a hazard; and
- (4) The procedure for evaluating the condition of the aboveground storage tanks and appurtenances.

d. The operator of a facility shall train facility personnel upon any changes to the contents of the initial training program or every three years and shall document this training in the facility records.

7. Leak detection.

The operator shall operate, maintain, monitor and keep records of the system established for early detection of a discharge to groundwater (i.e., a method of leak detection) as required by 9 VAC 25-91-170 A 18 and contained in the facility's approved ODCP. These activities shall be inspected and approved by the department.

9 VAC 25-91-140. Performance standards for aboveground storage tanks newly installed, retrofitted, or brought into use.

- A. All ASTs shall be built in accordance with the applicable design standards adopted by Underwriters Laboratories, the American Petroleum Institute, the Steel Tank Institute or other standard approved by the board.
- B. All ASTs shall be strength tested before being placed in use in accordance with the applicable code or standard under which they were built.
- C. ASTs that have the tank bottom in direct contact with the soil shall have a determination made by a corrosion professional as to the type and degree of corrosion protection needed to ensure the integrity of the tank system during the use of the tank. If a survey indicates the need for corrosion protection for the new installation, corrosion protection shall be provided.
- D. ASTs installed after the effective date of this chapter shall have a release prevention barrier (RPB) installed either under or in the bottom of the tank. The RPB shall be capable of (i) preventing the release of the oil and (ii) containing or channeling the oil for leak detection.
- E. Existing ASTs that are retrofitted (reconstruction or bottom replacement) or brought back into use shall be brought into compliance with subsections A, B, C, and D of this section. The operator shall submit a schedule to the board of the work to be performed in order to bring the

existing AST into compliance with new-built construction standards. This compliance schedule shall be submitted to the board no less than six months prior to the anticipated completion date.

F. Operators of ASTs installed, retrofitted (reconstruction or bottom replacement) or brought back into use shall also comply with 9 VAC 25-91-130 A or 9 VAC 25-91-130 B, whichever is applicable.

G. All newly installed ASTs shall be constructed and installed in a manner consistent with the applicable standards and requirements found in NFPA 30 and the BOCA® National Building Code or other standards approved by the board. Approval and any applicable permits shall be obtained from the local building official before construction starts.

H. Compliance dates for subsections A through G of this section.

1. Operators of a newly installed, retrofitted or brought-back-into-use facility or AST shall comply with the requirements of this section within 30 days prior to being placed into service.
2. Operators of facilities exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) shall comply with these requirements within 120 days of the effective date of this chapter.
3. Operators of facilities not exempted under § 62.1-44.34:17 D of the Code of Virginia (i.e., exempted facilities not engaged in the resale of oil) and who have met these requirements on or before June 30, 1993, shall be deemed to be in compliance with these requirements as of the effective date of this chapter.

9 VAC 25-91-150. Recordkeeping and access to facilities.

A. Each operator of a facility subject to this chapter shall maintain the following records:

1. All records relating to all required measurements and inventory of oil at the facility;
2. All records relating to required tank/pipe testing;
3. All records relating to spill events and other discharges of oil from the facility;
4. All supporting documentation for developed contingency plans;
5. All records for implementation and monitoring of leak detection and applicable provisions of 9 VAC 25-91-170 A 18 of Part IV (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) Requirements) of this chapter;
6. All records relating to training of individuals; and
7. Any records required to be kept by statute or regulation of the board.

B. These records shall be kept by the operator of a facility at the facility or at an alternate location approved by the board for a period of no less than five years unless otherwise indicated.

C. Upon request, each operator shall make these records available to the board and to the director or coordinator of emergency services for the locality in which the facility is located or to

any political subdivision within one mile of the facility.

D. Operators shall maintain all records relating to compliance with this chapter for a period of no less than five years from the date the board receives notice of the closure unless otherwise indicated. These records shall be made available to the board at any time upon request.

9 VAC 25-91-160. Variances to the requirements of Part III (9 VAC 25-91-130 *et seq.*) of this chapter.

A. General criteria for granting a variance on a case-by-case basis.

1. The board is required by § 62.1-44.34:15.1 of the Code of Virginia to establish the criteria to grant variances of the AST pollution prevention requirements on a case-by-case basis and by regulation for categories of ASTs. Any person affected by this chapter may petition the board to grant a variance of any requirement of Part III (9 VAC 25-91-130 *et seq.*) of this chapter.

2. The board will not grant any petition for a variance related to:

- a. Definitions;
- b. Registration;
- c. Classification of aboveground storage tanks; or
- d. Oil discharge contingency plans.

3. The board may grant a variance if:

- a. The applicant demonstrates to the satisfaction of the board that the alternate design or operation will result in a facility that is equally capable of preventing pollution of state water, land, and storm drains from the discharge of oil from new and existing ASTs. If the variance would extend a deadline, the petitioner shall demonstrate that a good faith effort to comply with the deadline was made;
- b. Granting the variance will not result in an unreasonable risk to human health or the environment; and
- c. Granting the variance will not result in a conflict with applicable local codes or ordinances.

4. In rendering a decision, the board may:

- a. Deny the petition;
- b. Grant the variance as requested;
- c. Grant a modified variance which:
 - (1) Specifies additional or modified requirements;
 - (2) Includes a schedule for:
 - (a) Periodic review of the modified requirements;

(b) Implementation by the facility of such control measures as the board finds necessary in order that the variance may be granted; or

(c) Compliance, including increments of progress, by the facility with each requirement of the variance; or

(3) Specifies the termination date of the variance.

d. Grant a partial variance that:

(1) Specifies a particular part of the requirement;

(2) Specifies a particular part of the request;

(3) Includes a schedule for:

(a) Periodic review of the partial requirements;

(b) Implementation by the facility of such control measures as the board finds necessary in order that the variance may be granted; or

(4) Specifies the termination date of the variance.

5. An operator must comply with the requirements of this chapter even when a variance request is under consideration by the board. A variance request submitted but disapproved, or submitted but not yet decided, shall not constitute a defense or delay to any enforcement action undertaken by the department.

B. Administrative procedures.

1. General requirements for the submission of a petition by the owner or a duly authorized representative. All petitions submitted to the board shall include:

a. The owner's or duly authorized representative's name and address;

b. A citation of the regulatory requirement to which a variance is requested;

c. An explanation of the need or desire for the proposed action, including the reason the existing requirement is not achievable or is impractical compared to the alternative being proposed;

d. An explanation of the impact to applicable local codes and ordinances;

e. A description of the proposed action;

f. The duration of the variance, if applicable;

g. The potential impact of the variance on human health or the environment and a justification of the proposed action's ability to provide equivalent protection of human health and the environment as would compliance with the regulatory requirements;

h. Enforcement action against or pending against the petitioner;

i. Other information believed by the applicant to be pertinent; and

j. The following statements signed by the owner or a duly authorized representative:

“I certify that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. The petition, if granted, will not be in violation of any local codes or ordinances or pose an unreasonable risk to human health or the environment. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

2. In addition to the general information required of all petitioners under subdivision 1 of this subsection (i.e., 9 VAC 25-91-160 B 1), the petitioner shall submit other information as may be required by the board.

3. All variance petitions and correspondence shall be submitted to the following address:

Mailing Address:

Department of Environmental Quality
Office of Spill Response and Remediation
P.O. Box 10009
Richmond, VA 23240-0009

Street Address:

Department of Environmental Quality
Office of Spill Response and Remediation
629 E. Main Street
Richmond, VA 23219

C. Petition processing.

1. After receiving a petition that includes the information required in subdivision B 1 of this section (i.e., 9VAC 25-91-160 B 1), the board will determine whether the information received is sufficient to render the decision. If the information is deemed to be insufficient, the board will specify additional information needed and request that it be furnished.

2. The petitioner may submit the additional information requested, may attempt to show that no reasonable basis exists for the request for additional information, or may withdraw the petition. If the board agrees that no reasonable basis exists for the request for additional information, the board will act in accordance with subdivision 3 b of this subsection (i.e., 9 VAC 25-91-160 C 3 b). If the board continues to believe that a

reasonable basis exists to require the submission of such information, the board will deny the petition.

3. After the petition is deemed complete:

- a. The board will review the petition;
- b. After evaluating the petition, the board will notify the applicant of the following final decision:
 - (1) Petition is denied;
 - (2) Requested variance is granted; or
 - (3) Modified or partial variance is granted;
- c. The board shall send written notification of the variance to the chief administrative officer of the locality in which the facility is located; and
- d. If the board grants a variance request, the notice to the petitioner shall provide that the variance may be terminated upon a finding by the board that the petitioner has failed to comply with any variance requirements.

D. Variance by regulation for categories of ASTs.

1. ASTs totally off ground with all associated piping off ground shall not be subject to inventory control or testing for significant variation.
2. ASTs with a capacity of 5,000 gallons or less located within a building or structure designed to fully contain a discharge of oil shall not be subject to inventory control or testing for significant variation.
3. ASTs containing No. 5 or No. 6 fuel oil for consumption on the premises where stored shall not be subject to inventory control or testing for significant variation.
4. ASTs with release prevention barriers (RPBs) with all associated piping off ground, with an established corrosion rate and cathodic protection that protects the entire area of the tank bottom shall not be subject to inventory control or testing for significant variation.
5. ASTs with release prevention barriers (RPBs) with all associated piping off ground and with secondary containment that is 72 hours impermeable shall not be subject to inventory control or testing for significant variation.
6. ASTs that meet the construction and installation standards of STI - F911-93, F921-93, or F941-94 or equivalent standards approved by the board shall not be subject to inventory control or testing for significant variation.
7. For refineries with a continuous leak detection monitoring system and cathodic protection of the AST and piping, a significant variation of inventory shall be considered a loss in excess of 3.0% by weight of the difference between the refinery's input and output.
8. Vaulted tanks meeting UL 2245 or an equivalent standard approved by the board shall not be subject to inventory control or testing for significant variation.

9. An AST used in the production/manufacturing process with full containment that is 72 hours impervious shall not be subject to inventory control or testing for significant variation.
10. An AST of 12,000 gallons or less with full containment that is 72 hours impervious, inside a building and used for the storage of heating oil consumed on the premises shall not be subject to inventory control or testing for significant variation.

PART IV.
OIL DISCHARGE CONTINGENCY PLAN (ODCP) REQUIREMENTS.

9 VAC 25-91-170. Contingency plan requirements and approval.

A. Section 62.1-44.34:15 of the Code of Virginia requires that all facility oil discharge contingency plans shall provide for the use of the best available technology (economically feasible, proven effective and reliable and compatible with the safe operation of the facility) at the time the plan is submitted for approval and, in order to be approvable, shall contain, at a minimum, the following requirements:

1. The name of the facility, geographic location and access routes from land and water if applicable;
2. The names of the operators of the facility including address and phone number;
3. A physical description of the facility consisting of a plan of the facility which identifies the applicable oil storage areas, transfer locations, control stations, above and below ground oil transfer piping within the facility boundary (and including adjacent easements and leased property), monitoring systems, leak detection systems and location of any safety protection devices;
4. A copy of the material safety data sheet (MSDS) or its equivalent for each oil or groups of oil with similar characteristics stored, transferred or handled at the facility. To be equivalent, the submission shall contain the following:
 - a. Generic or chemical name of the oil;
 - b. Hazards involved in handling the oil; and
 - c. A list of fire-fighting procedures and extinguishing agents effective with fires involving each oil or groups of oil demonstrating similar hazardous properties which require the same fire-fighting procedures;
5. The maximum storage or handling capacity of the facility and the individual tank capacities or, in the case of a pipeline, the average daily throughput of oil;
6. A complete listing, including 24-hour phone numbers, of all federal, state and local agencies required to be notified in the event of a discharge;
7. The position title of the individuals responsible for making the required notifications and a copy of the notification check-off list;
8. The position title, address and phone number of the individuals authorized to act on behalf of the operator to implement containment and cleanup actions. This individual shall

be available on a 24-hour basis to ensure the appropriate containment and cleanup actions are initiated;

9. The position title of the individuals designated by the operator to ensure compliance during containment and cleanup of a discharge with applicable federal, state and local requirements for disposal of both solid and liquid wastes;

10. Identification and ensurance by contract or other means acceptable to the board of the availability of private personnel and equipment necessary to remove to the maximum extent practicable the worst case discharge and to mitigate or prevent a substantial threat of such a discharge. This contract or agreement shall ensure a certain response within the shortest feasible time. The board will accept a letter of understanding between the operator and the response contractors which attests to this capability being readily available. Membership in a cleanup cooperative or other response organization is also acceptable. A listing of contractor or cooperative capabilities, including an inventory of the equipment and specification of the other information required by subdivision 12 of this subsection (i.e., 9 VAC 25-91-170 A 12), shall be included unless these capabilities are already on file with the board;

11. Assessment of the worst case discharge, including measures to limit the outflow of oil, response strategy and operational plan. For the purpose of this chapter, the worst case discharge is the instantaneous release of the volume of the largest tank on the facility (125% of the volume of the largest tank for facilities with multiple tanks within a single containment dike) during adverse weather conditions. Facilities shall take into consideration that due to hydraulic pressure of the release, the secondary containment will not contain this volume in its entirety. The worst case discharge for a pipeline shall be based upon the volume of a discharge calculated using the maximum pressure, velocity, and elevation, and the largest pipe size and pipeline location. If facility design and operation indicates that this worst case discharge scenario does not meet the intent of this chapter, the board may require submission of other worst case scenarios on a facility-specific basis;

12. Inventory of facility containment equipment, including specification of quantity, type, location, time limits for gaining access to the equipment, and identification of facility personnel trained in its use;

13. Identification and location of natural resources at risk (including, but not limited to, surface waters as indicated on the applicable USGS quadrangle maps, groundwater, public water supplies, public and private water wells and springs, state or federal wildlife management areas, wildlife refuges, management areas, sanctuaries, property listed on the National Register of Historic Places and property listed on the National Register of Natural Landmarks), priorities for protection and means of protecting these resources;

a. In addition to the requirements set forth in this subdivision, the operator of a facility with an aggregate aboveground storage or handling capacity of one million gallons or greater of oil shall conduct a groundwater characterization study (GCS)

within the geographic boundaries of the facility to be submitted as part of the contingency plan. The operator of such a facility shall utilize upgradient and downgradient GCS monitoring wells to satisfy this requirement. At the time of a discharge, the operator of such a facility shall conduct further characterization of the groundwater as required by the board;

b. For purposes of satisfying the requirement to identify and locate natural resources at risk, the operator of a pipeline shall identify surface waters as indicated on the applicable USGS quadrangle maps, public water supplies, state or federal wildlife management areas, wildlife refuges, management areas, sanctuaries, property listed on the National Register of Historic Places and property listed on the National Register of Natural Landmarks which could reasonably be expected to be impacted by the discharge. At the time of a discharge, the operator of a pipeline shall conduct a complete groundwater characterization study as required by the board and identify other natural resources at risk including public and private wells or springs which could reasonably be expected to be impacted by the discharge;

14. Identification and location of any municipal or other services (including, but not limited to, storm drains, storm water collection systems and sanitary sewer systems) at risk, notification procedures applicable and means of protection of these services. The identification and location of all municipal services shall include those services for which official records are available. The operator of a pipeline shall determine which sections of the system are located in areas that would require an immediate response by the operator to prevent hazards to the public if a discharge occurred;

15. If applicable, the facility's responsibility for responding to a discharge from a vessel moored at the facility and the identity of the sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously;

16. A description of training, equipment testing, and periodic unannounced oil discharge drills conducted by the operator to mitigate or prevent the discharge or the substantial threat of a discharge;

17. The facility's oil inventory control procedures. Facilities shall ensure that this control procedure is capable of providing for the detection of a discharge of oil within the shortest feasible time in accordance with recognized engineering practices and industry measurement standards;

18. A detailed description of a system for early detection of a discharge to groundwater, utilizing up-gradient and down-gradient leak detection monitoring wells or other groundwater protection measures acceptable to the board (i.e., visual, interstitial, vapor and leak detection groundwater monitoring wells). The system will be operated, maintained and monitored in the manner approved and be subject to inspection by the department under the pollution prevention requirements of Part III (9 VAC 25-91-130 *et seq.*, Pollution Prevention Requirements) of this chapter. Operators subject to subdivision

13 a of this subsection (i.e., 9 VAC 25-91-170 A 13 a), may utilize such GCS wells to meet this requirement when approved by the board;

19. The procedures to be followed, upon detection of a discharge of oil, for testing and inspection of all tanks, piping and all oil transfer associated equipment that could reasonably be expected to be a point source for the discharge. These procedures shall be conducted within the shortest feasible time, include a progression of written procedures from visual inspection to formal testing and be conducted in accordance with recognized engineering practices;

20. The facility's preventive maintenance procedures applicable to the critical equipment of an oil storage and transfer system as well as the maximum pressure for each oil transfer system. The term "critical equipment" shall mean equipment that affects the safe operation of an oil storage and handling system;

21. A description of the security procedures used by facility personnel to avoid intentional or unintentional damage to the facility; and

22. A post-discharge review procedure to assess the discharge response in its entirety.

B. All nonexempt facility operators shall file with the board the application form for approval of the contingency plan. This form shall be submitted with the required contingency plan and shall be completed insofar as it pertains to the facility. The operator shall sign and date the certification statement on the application form. If the operator is a corporation, the form shall be signed by an authorized corporate official; if the operator is a municipality, state, federal or other public agency, the form shall be signed by an authorized executive officer or ranking elected official; if the operator is a partnership or sole proprietorship, the form shall be signed by a general partner or the sole proprietor. All forms shall be acknowledged before a Notary Public.

C. Contingency plans shall be filed with and approved by the board. The plan shall be submitted to the board at the address specified in 9 VAC 25-91-60 A. A copy of the original with the facility-specific information and the approval letter shall be retained at the facility and shall be readily available for inspection.

D. An operator of multiple facilities may submit a single contingency plan encompassing more than one facility if the facilities are located within the defined boundaries of the same city or county or if the facilities are similar in design and operation. The plan shall contain site-specific information as required by subsection A of this section for each facility. The site-specific information shall be placed in appendices to the plan.

Upon renewal of an approved contingency plan submitted under this subsection, the board shall consider the individual facilities subject to all provisions of subsections E through J of this section.

E. Oil discharge contingency plans shall be reviewed, updated if necessary and resubmitted to the board for approval every 60 months from the date of approval unless significant changes occur sooner. Operators shall notify the board of significant changes and make appropriate amendments

to the contingency plan within 30 days of the occurrence. For the purpose of this chapter, a significant change includes the following:

1. A change of operator of the facility;
2. An increase in the maximum storage or handling capacity of the facility that would change the measures to limit the outflow of oil, response strategy or operational plan in the event of the worst case discharge;
3. A decrease in the availability of private personnel or equipment necessary to remove to the maximum extent practicable the worst case discharge and to mitigate or prevent a substantial threat of such a discharge;
4. A change in the type of product dealt in, stored or handled by any facility covered by the plan for which a MSDS or its equivalent has not been submitted as part of the plan; or
5. A change in the method or operation utilized for the early detection of a discharge to groundwater (i.e., change in a method of leak detection).

F. Updated plans or certification for renewal of an existing plan shall be submitted to the board for review and approval not less than 90 days prior to expiration of approval of the current plan. Submittal of the certification for renewal for an existing plan shall be made in accordance with the provisions of subsection B of this section. All notifications of changes, renewals, submissions and updates of plans required by this chapter shall be directed to the respective regional office.

G. An oil discharge exercise may be required by the board to demonstrate the facility's ability to implement the contingency plan. The board will consult with the operator of the facility prior to initiating an exercise. Where appropriate, the board will ensure coordination with federal agencies prior to initiation of an exercise.

H. The board may, after notice and opportunity for a conference pursuant to § 9-6.14:11 of the Code of Virginia, deny or modify its approval of an oil discharge contingency plan if it determines that:

1. The plan as submitted fails to provide sufficient information for the board to process, review and evaluate the plan or fails to ensure the applicant can take such steps as are necessary to protect environmentally sensitive areas, to respond to the threat of a discharge, and to contain and clean up an oil discharge within the shortest feasible time;
2. A significant change has occurred in the operation of the facility covered by the plan;
3. The facility's discharge experience or its inability to implement its plan in an oil spill discharge exercise demonstrates a necessity for modification; or
4. There has been a significant change in the best available technology since the plan was approved.

I. The board, after notice and opportunity for hearing, may revoke its approval of an oil discharge contingency plan if it determines that:

1. Approval was obtained by fraud or misrepresentation;
2. The plan cannot be implemented as approved;
3. A term or condition of approval of this chapter has been violated; or
4. The facility is no longer in operation.

J. A Facility Response Plan (FRP) developed pursuant to § 4202 of the federal Oil Pollution Act of 1990, Pub. L. No. 101-380, 33 USCA § 2716 (1996), may be accepted as meeting the requirements of subdivisions A 1 through A 22 of this section. The operator shall submit a copy of the FRP and a copy of the currently valid FRP approval letter for the facility for review and approval by the board. The FRP shall contain a cross reference in order to index pages for the specific requirements of the ODCP. The FRP shall also contain the satisfaction of the requirements of subdivisions A 13 a and A 18 of this section. This information shall be resubmitted in accordance with the renewal period established by federal statute or regulation but in no instance shall the renewal period exceed five years. The board shall be notified of any plan amendments.

PART V.
GROUNDWATER CHARACTERIZATION STUDY(GCS) AND
GCS WELL MONITORING REQUIREMENTS.

9 VAC 25-91-180. Groundwater characterization study (GCS).

A. Section 62.1-44.34:15 of the Code of Virginia requires the operator to apply to the board for approval of an ODCP. The ODCP shall be accompanied by other relevant information required by the board (e.g., groundwater characterization study (GCS) of each facility with an aggregate aboveground storage capacity of one million gallons or greater of oil). The purpose of this GCS is to determine baseline conditions and flow of groundwater within the geographic boundaries of the facility. The operator's results of the GCS shall be subject to the review and approval of the department and shall be submitted to the department as part of the Oil Discharge Contingency Plan (ODCP) referenced in Part IV, (9 VAC 25-91-170, Oil Discharge Contingency Plan (ODCP) requirements) of this chapter. The GCS wells are required by 9 VAC 25-91-170 A 13 a in the ODCP requirements.

B. Section 62.1-44.34:15.1 of the Code of Virginia requires that the operator of a facility with an aggregate capacity of one million gallons or greater of oil conduct monthly gauging and inspection, monitoring of well headspace, and quarterly sampling and laboratory analysis of all groundwater monitoring wells located at the facility to determine the presence of petroleum or petroleum by-product contamination. The monitoring requirements of these GCS wells are in 9 VAC 25-91-190, GCS well monitoring.

C. Although GCS monitoring wells may be approved for use as part of a leak detection system, the GCS well monitoring requirement should not be confused with any requirement for leak detection monitoring wells required by 9 VAC 25-91-170 A 18.

9 VAC 25-91-190. GCS well monitoring.

A. All GCS wells required by 9 VAC 25-91-170 A 13 a in the ODCP requirements shall be monitored as follows:

1. Monthly gauging of GCS groundwater monitoring wells.
 - a. Measure and record static water levels monthly.
 - b. Reference all water-level measurements, including total well-depth measurements, from an established and documented point on the top of the well casing.
 - c. Measurements shall be correlated with mean sea level datum and measured to the nearest 0.01 ft.
2. Quarterly groundwater and vapor monitoring.
 - a. Quarterly vapor monitoring of all GCS wells identified in the ODCP - GCS shall be conducted prior to collecting quarterly groundwater samples.

- b. Quarterly vapor monitoring consists of collecting one monitoring well headspace measurement.
- c. Quarterly groundwater sampling (visual inspection) of all wells identified in the ODCP-GCS shall be conducted.
 - (1) Measure for free product on top of the groundwater.
 - (2) Collect groundwater samples for visual inspection.
- d. Tabulate vapor measurements and quarterly visual groundwater monitoring results for each well sampled.

3. Annual groundwater monitoring for laboratory analysis.

- a. Annual groundwater sampling of all wells identified in the ODCP groundwater characterization study (GCS) shall be conducted.
- b. Annual groundwater monitoring consists of collecting groundwater samples for laboratory analysis.
- c. Groundwater samples shall be collected and analyzed for BTEX and TPH for each well.

B. The GCS groundwater well monitoring should not be confused with the monitoring of groundwater wells utilized to satisfy 9 VAC 25-91-170 A 18 (i.e., leak detection wells).

9 VAC 25-91-200. Reporting; GCS well monitoring report.

A. All observations and data gathered as a result of the requirements in 9 VAC 25-91-190 and any other data obtained from those same wells shall be maintained at the facility, compiled, and submitted to the board annually in the following format:

I. Monthly gauging of GCS groundwater monitoring wells.

- 1.0 Summary of measurement procedures.
- 2.0 Table of static water levels recorded from monitoring wells.

II. Quarterly GCS groundwater vapor monitoring.

- 1.0 Summary of groundwater and vapor collection procedures.
- 2.0 Table of vapor measurements from monitoring well headspace.
- 3.0 Table of groundwater monitoring well visual inspection results.

III. Annual GCS groundwater quality evaluation.

- 1.0 Summary of groundwater collection methods.
- 2.0 Summary of groundwater analytical results and interpretation.
- 3.0 Table of analytical methods used.

4.0 Table of analytical results.

5.0 Table of field and trip blank results.

6.0 Groundwater laboratory data including chain-of-custody forms.

7.0 Laboratory quality assurance review.

B. The annual GCS monitoring report shall include the facility name and address, operator, and consultant, if any, who prepared the report, contact person and the date the report was submitted.

9 VAC 25-91-210. Response.

Should any observations or data indicate the presence of petroleum hydrocarbons in groundwater, the results shall be immediately reported to the board and to the local director or coordinator of emergency services appointed pursuant to § 44-146.19 of the Code of Virginia.

PART VI.
REFERENCED PUBLICATIONS.

9 VAC 25-91-220. Referenced publications.

A. The following documents or portions thereof are referenced in this chapter.

1. Underwriters Laboratories Standards: Specification 142, "Steel Aboveground Tanks for Flammable and Combustible Liquids," Seventh Edition;
2. American Petroleum Institute (API) Standards:
 - a. API 12B: Specification 12B and Supplement 2, October 1, 1990, "Specification for Bolted Tanks for Storage of Production Liquids," Thirteenth Edition;
 - b. API 12D: Specification 12D and Supplement 2, 1982 as supplemented 1985, "Specification for Field Welded or Storage of Production Liquids," Ninth Edition;
 - c. API 12F: Specification 12 F, and Supplement 1, 1982 as supplemented 1988, "Specification for Shop Welded Tanks for Storage of Production Liquids," Tenth Edition;
 - d. API 570: Piping Inspection Code, Inspection, Repair, Alteration, and Rerating Of In-Service Piping Systems, first edition, June 1993;
 - e. API 620: Standard 620, 1990, "Design and Construction of Large, Welded, Low-Pressure Storage Tanks," Eighth Edition;
 - f. API 650: Standard 650, 1988, "Welded Steel Tanks for Oil Storage," Eighth Edition;
 - g. API 652: Recommended Practice 652, April 1991, "Lining of Aboveground Petroleum Storage Tank Bottoms," First Edition;
 - h. API 653: API Standard 653, January 1991, "Tank Inspection, Repair, Alteration, and Reconstruction" First Edition, incorporates supplement 1, January 1992;
 - i. API 2350: Recommended Practice 2350, March 1987, "Overfill Protection for Petroleum Storage Tanks";
3. National Fire Protection Association (NFPA) Standards:
 - a. NFPA 30, "Flammable and Combustible Liquids Code," 1996 edition;
 - b. NFPA 30A, "Automotive and Marine Service Station Code," 1990 edition;
4. National Association of Corrosion Engineers (NACE) Standards: Recommended Practice 0285-95 (1995), "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems";
5. 40 CFR Part 112, (1997) "Oil Pollution Prevention";

6. 29 CFR Part 1910.106, (1997) “Flammable and Combustible Liquids”;
7. Uniform Statewide Building Code (USBC), 1996 edition;
8. Virginia Statewide Fire Prevention Code (SWFPC), 1996 edition;
9. Building Officials & Code Administrators International, Inc. (BOCA);

BOCA - National Building Code, 1996 edition:

- a. Chapter 32 - Flammable and Combustible Liquids;
 - b. Chapter 23 - Hazardous Materials; and
10. Steel Tank Institute (STI), Standards and Recommended Practices:
 - a. STI Standard for Diked Aboveground Storage Tanks F911-93;
 - b. STI Standard for Aboveground Tanks with Integral Secondary Containment F921-93;
 - c. STI Fireguard™ Thermally Insulated Aboveground Storage Tank Standard F941-94.

B. The issue of the industry specification, standard, or code, including addenda or changes, described in this chapter as referenced publications, shall be used unless circumstances warrant the use of an earlier date and are specifically authorized by the board.